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Ask the Experts

by Steve Rice & Richard MacLean
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Customers Set Agenda for EH&S Professionals

Also this month:

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Q: What are corporate EH&S professionals' top priorities during these uncertain times?
Steve: Around the new year lots of articles and reports are published on just about every facet of business, markets or industries ever imagined. As I've yet to see survey reports on this topic, I decided to conduct my own informal survey of more than 50 EH&S professionals in the environmental services industry, using a value-chain approach: I did not ask them what issue is important to them, or even what their management is telling them what is important. Rather, I asked them what their customers are telling them is important. If it is important to the customer, whether internal or external, then it needs to be important to the EH&S professional and organization. Out of 125 responses (some people indicated more than one issue), here's what their customers say are the most important issues:

- Reduce costs (21)
- Create/increase value (17)
- Maintain/improve company and brand image (10)
- Manage the financial/investment community's interest in the company, its bond rating and stock value (9)
- Personal job security; insufficient resources to achieve the desired tasks and results (8)
- Post-merger integration of company organizations, facilities and personnel (7).

The remaining 53 responses were distributed across 22 different responses. I was interested to note that transparent reporting, product/service innovation, sustainable development, issue management, corporate responsibility and even professional development had no more than three responses each. Be careful, though, not to dismiss them. Although individual

discussions revealed that these issues do not have a broad base of importance, they are very important to those customers who indicated them. Suppliers, and EH&S professionals, who neglect these issues as not being of sufficient priority or market size may find that they are out of tune with those very focused, intent customers. Keep an eye on these narrower issues; there are signs of increasingly broader interest in them. At the same time, however, the broader issues must also be addressed. In response, we have revamped our Adding Business Value: Financial Management for EH&S Professionals workshop to address directly the top six issues of importance as indicated by the survey, as well as many of those other 22 issues of more narrow importance. Back to Top

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Q: What is the ideal EHS organizational structure? Richard: Company organizations seem to change every few years with each passing management fad and new executive team in charge. Shaking up the organization from time to time, as traumatic as it may be, has its benefits. The top business executives and their management consultants understand the core business functions (e.g., manufacturing, marketing, finance) and service functions (e.g., human resources, information technology). In other words, when they tinker, it is for specific business objectives and they know (or at least we hope they know) what they are doing. I wish I could say the same about business executives' understanding of the EHS function. The EHS function is three-dimensional: service, governance and strategic. Unfortunately, management often views EHS departments exclusively in the first dimension: a service function (i.e., overhead, non strategic) needed to complete transactional tasks (e.g., permit writing, monitoring). As a result, the organizational thrust over the past decade has placed EHS groups in shared service-type organizations or outsourced specific activities. Companies that were early proponents of outsourcing and/or shared service have backed away once they better understood the governance dimension (e.g., risk management, due diligence). Management responded by regaining control over some functions that were outsourced and by strengthening the oversight function. The third dimension, strategy, has not been widely recognized by business management and most EHS organizations are still structured to address the issues of the past thirty years. Business managers are still puzzled by the environmental buzzword called sustainable development. This confusion has prevented the EHS function from being adequately positioned to shape the strategic business agenda. Companies have initiated a number of strategic efforts in market development, product design, and competitive positioning related to their EHS strategies, but most appear to be one-off efforts, not fully integrated into the business fabric. The bottom line is that the ideal structure is one that fully addresses all three dimensions. The next generation of EHS organizations will not resemble those of today. For example, external partnerships and internal integration may dominate the service dimension; the governance dimension may be taken over by finance or legal, and the strategic role may be provided by a new group of strategists working among the executive ranks. Back to Top

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Q: Who deserves recognition for extraordinary EHS efforts in 2001? Steve: I have always admired the honesty and strength shown by companies that try to do what is "right," take chances in the face of adversity, and challenge the status quo. Even if their efforts fall short, I credit them for trying. If I were to give awards for the best efforts of 2001, here would be a few of my winners:

1. **Chiquita Brands** - Despite a trade dispute that helped drive Chiquita into bankruptcy in November, the company stayed with its social responsibility efforts and produced a highly respected corporate responsibility report. If that doesn't typify tenacity and commitment, I don't know what does.
2. **ExxonMobil** - Its novel approach to the distribution of development royalty payments for its production unit in Chad proved that a partnership comprised of an international company, an international financial institution and a local government can make a difference in ensuring that globalization can be used to help governments improve the lives of their citizens. (See our GreenBiz piece, Credit for ExxonMobil's Experiment.)
3. **Green@Work magazine** - Launching a U.S.-based magazine on corporate sustainability, targeted toward corporate leaders, about U.S.-based companies' activities and at an affordable subscription price, is a significant accomplishment. It fills

a niche that isn't quite covered by the European-based publications, yet goes beyond many of the other U.S.-based publications. My "must read" subscription list just grew by one.

4. **Global Environmental Management Initiative** (GEMI) - Know any other environmental trade or professional organizations increases membership these days? GEMI and it members do the right things.
5. **The American Forest & Paper Association's Sustainable Forestry Initiative (SFI)** - Despite competing against the Forest Stewardship Council's certification program and weathering criticism of its verification process, SFI is Responsible Care® on steroids and offers a choice in approaches to the certification effort.

I am sure that there are other standouds, but these are the ones that strike me as showing tenacity and toughness when it would be easier not to rock the boat. Back to Top

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Q: How can I explain sustainable development to our business management groups?
Richard: Sustainable development boils down to:

1. Responsible resource utilization as measured by key metrics, and
2. A business strategy anchored to emerging ecological realities.

First, explain the difference between the views of an ecologist and an economist on the global economy. The definitive reference is by Lester Brown of the Earth Policy Institute in his free book, Eco-Economy. The essence of his analysis is that an economist sees short-term prices for resources as relatively low (i.e., all is well with the global economy). They rely on the market to guide decisions. An ecologist sees an economy that is increasingly in conflict with earth's ecological limits -- a path which will lead to economic decline if the earth's "natural capital" is depleted. Skilled workers and efficient technology used to be in short supply. Now human capital is increasingly abundant and natural capital is growing scarce. Technological innovations have been able to keep pace, but an ecologist sees these forces as already reaching critical limits in some regions. When it comes to a conflict between the laws of economics and the laws of the environment, Mother Nature rules. Key point: in an integrated, global economy, a collapse in one country (e.g., widespread starvation or economic ruin due to depleted resources) affects us all. Business strategies must address their resource demands and the markets for their products and services within both economic and an ecological contexts. Second, the future will be all about the care and use of natural capital. Those that demonstrate that they are using resources efficiently and responsibly gain competitive advantage. Those that are irresponsible are not even allowed to operate. Stakeholders will increasingly demand proof that companies are being responsible citizens and that the systems they use to measure, monitor and verify this commitment are evolving. Companies will need to identify what metrics will matter in the future and ensure that they are, as a minimum, in the middle of the pack. [Editor's note: Check out GreenBiz.com's sustainable development resource center for help making your business case.] Back to Top

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Q: Which significant sustainability technologies are on the rise? Steve: Chiral chemistry, biocatalysts, and nanotechnology. Here's why: Chiral chemistry takes traditional molecules, separates them into optical isomers (e.g. "mirror images"), and uses one of these isomers to produce the same or more effective results with few of the undesirable side effects. They are often used in reactive chemistries and pharmaceuticals. Biocatalysts are the next emerging technology with a significant potential to fundamentally change the business landscape. These catalysts, usually enzymes, greatly increase the efficiency and speed by which products from natural, renewable raw materials can be produced, usually by fermentation. BASF, DSM, Dupont, and other companies are investigating how to convert traditional chemical synthesis processes to biocatalytic processes to reduce costs and increase the use of renewable resources. As an added benefit, these companies will become less dependent on increasingly unreliable sources of conventional raw materials. Most of the breakthroughs so far have been concentrated in the area of biopharmaceuticals, such as DSM's antibiotic intermediate, and vitamins such as BASF's vitamin B2. Early work on these types of products has concentrated on developing crops with traits that can be used to produce the desired

chemical raw materials. For the foreseeable future, the focus will be on producing high-value, low-volume products such as pharmaceuticals, amino acids and a few specialty chemicals. Biocatalyst processes may never be able to produce the product volume, on the order of tons or hundreds of tons per day, necessary to compete with traditional processes that produce high-volume commodity chemicals. Additional advances, however, may result in the ability for biocatalysts to produce larger volumes of high-value products at a very low cost. This may allow the companies developing such products to sell them, profitably, at a price below their competitors' production cost. One doesn't have to be a financial analyst to predict that the producing company will reap big rewards, and competitors will be left far behind. Then there's nanotechnology, in which processing takes place on the molecular level -- molecules act like tiny factories. A few products are just now reaching the market with the potential to begin realizing "Factor 10" material resource efficiencies. Back to Top

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Q: Burning biomass to produce electricity: Is it really sustainable? Steve: Biomass materials such as vegetative waste and wood scraps are renewable and could be sustainable sources of raw materials for a variety of end-uses. But I fail to see how the use of biomass materials as a fuel source could be considered as an example of sustainability, except in a few limited instances. After all, with all the speeches and efforts to REDUCE the use of carbon-based fuels as a means of reducing CO2 greenhouse gas emissions, why would anyone want to use materials that have such high carbon intensities as fuel? The carbon that is sequestered gets re-released into the atmosphere as CO2. In addition, biomass materials typically have a high non-organic component that when burned for energy is reduced to ash which could be reused but is usually landfilled. The argument that is given is that burning biomass merely releases CO2 that has already been taken out of the atmosphere, so therefore is an acceptable element of a greenhouse gas emission strategy. That is valid in that the burning of biomass doesn't add any NEW CO2 to the ecosystem. That position, however, collapses under the weight of biomass' high CO2 emission rate per unit of electricity generated. The objective is to reduce the amount of CO2 emitted into the atmosphere, not increase it. The two instances where the use of biomass to generate electricity might make sense are a) byproduct (e.g. not intentionally produced) wood scraps from wood processing facilities to generate onsite steam and/or electricity and b) high-efficiency wood-burning stoves where other fuels are not available. While not necessarily perfect solutions, they provide a preferred option over their alternatives. Back to Top

Got A Question? Send your question about environmental management issues to Experts@GreenBiz.com We can't guarantee that we'll answer every question, but we'll try.

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